

In the Claims

1. (Withdrawn) A reinforcement rod for optical cables comprising:  
a compact fiber reinforced rod comprising:  
a plurality of elongated fiber members encased in a matrix of a UV cured vinyl ester resin material; and,  
an outer topcoat layer substantially surrounding said matrix, said outer topcoat layer including a thermoplastic hot melt polybutylene terephthalate copolymer resin to impart specific bonding characteristics to said rod.
2. (Withdrawn) The reinforcement rod of claim 1, wherein said elongated fiber members comprises an E glass fiber member.
3. (Withdrawn) The reinforcement rod of claim 1, wherein said elongated fiber members comprises an S glass fiber member.
4. (Withdrawn) The reinforcement rod of claim 1, wherein said elongated fiber members are selected from the group consisting of E glass fiber members, an S glass fiber members, and combinations thereof.
5. (Withdrawn) The reinforcement rod of claim 1, wherein said elongated fiber members are selected from the group consisting of E glass fiber members, S glass fiber members, high strength synthetic strands of poly(p-phenylene-2,6-benzobisoxazole) fiber members, and combinations thereof.
6. (Withdrawn) The reinforcement rod of claim 1, wherein said UV cured vinyl ester resin material is selected from the group consisting of novolac vinyl ester and 1, 6 hexane diol diacrylate copolymer material (VINCH 500), and novolac vinyl ester and dipropylene glycol diacrylate copolymer material (17-41B).

7-22. Canceled.

23. (Withdrawn) The reinforcement rod of claim 1, wherein said plurality of fibers comprises:

a plurality of E glass roving fibers; and  
a plurality of S glass roving fibers.

24. (Withdrawn) The reinforcement rod of claim 23, wherein said plurality of fibers further comprises a plurality of high strength synthetic strand members.

25. (Withdrawn) The reinforcement rod of claim 23, wherein said plurality of fibers further comprises a plurality of high strength aramid strands.

26. (Withdrawn) The reinforcement rod of claim 24, wherein said plurality of fibers further comprises a plurality of polyphenylene terephthalate strand members.

27. (Withdrawn) The reinforcement rod of claim 1, wherein said plurality of fibers comprises:

a plurality of E glass roving fibers;  
a plurality of S glass roving fibers; and  
a plurality of high strength aramid strands.

28. (Withdrawn) The reinforcement rod of claim 1, wherein said plurality of fibers comprises:

a plurality of E glass roving fibers;  
a plurality of S glass roving fibers; and  
a plurality of high strength polyphenylene terephthalate strands.

29-30. Canceled.

31. (Withdrawn) The reinforcement rod of claim 1, wherein said outer topcoat layer includes a polybutylene terephthalate and polyether glycol copolymer topcoat layer.

32. Canceled.

33. (Withdrawn) The reinforcement rod of claim 1, further comprising an upjacket substantially surrounding said compact fiber reinforced rod.

34. (Currently amended) A reinforcement rod for optical cables comprising:

a compact fiber reinforced rod comprising:

a plurality of elongated fiber members encased in a matrix of a UV cured vinyl ester resin material; and

an outer topcoat layer substantially surrounding said matrix, said outer topcoat layer including a thermoplastic hot melt ethylene acrylic acid ~~copolymer~~ polymer resin to impart specific bonding characteristics to said rod.

35. (Withdrawn) A reinforcement rod for optical cables comprising:  
a compact fiber reinforced rod comprising:  
a plurality of elongated fiber members encased in a matrix of a UV  
cured vinyl ester resin material; and  
an outer topcoat layer substantially surrounding said matrix, said  
outer topcoat layer including a thermoplastic hot melt polybutylene terephthalate and  
polyether glycol copolymer resin to impart specific bonding characteristics to said rod.
36. (Withdrawn) A reinforcement rod for optical cables comprising:  
a compact fiber reinforced rod comprising:  
a plurality of elongated fiber members encased in a matrix of a UV  
cured vinyl ester resin material; and  
an outer topcoat layer substantially surrounding said matrix, said  
outer topcoat layer consisting essentially of a thermoplastic hot melt polybutylene  
terephthalate copolymer resin to impart specific bonding characteristics to said rod.
37. (Currently amended) A reinforcement rod for optical cables comprising:  
a compact fiber reinforced rod comprising:  
a plurality of elongated fiber members encased in a matrix of a UV  
cured vinyl ester resin material; and  
an outer topcoat layer substantially surrounding said matrix, said  
outer topcoat layer consisting essentially of a thermoplastic hot melt ethylene acrylic acid  
~~copolymer~~ polymer resin to impart specific bonding characteristics to said rod.

38. (Withdrawn) A reinforcement rod for optical cables comprising:  
a compact fiber reinforced rod comprising:  
a plurality of elongated fiber members encased in a matrix of a UV  
cured vinyl ester resin material; and  
an outer topcoat layer substantially surrounding said matrix, said  
outer topcoat layer consisting essentially of a thermoplastic hot melt polybutylene  
terephthalate and polyether glycol copolymer resin to impart specific bonding  
characteristics to said rod.
39. (Withdrawn) The reinforcement rod of Claim 1 wherein said compact fiber  
reinforced rod includes an upjacket substantially surrounding said outer topcoat layer.
40. (Previously presented) The reinforcement rod of Claim 34 wherein said compact  
fiber reinforced rod includes an upjacket substantially surrounding said outer topcoat  
layer.
41. (Withdrawn) The reinforcement rod of Claim 35 wherein said compact fiber  
reinforced rod includes an upjacket substantially surrounding said outer topcoat layer.
42. (Withdrawn) The reinforcement rod of Claim 36 wherein said compact fiber  
reinforced rod includes an upjacket substantially surrounding said outer topcoat layer.
43. (Previously presented) The reinforcement rod of Claim 37 wherein said compact  
fiber reinforced rod includes an upjacket substantially surrounding said outer topcoat  
layer.
44. (Withdrawn) The reinforcement rod of Claim 38 wherein said compact fiber  
reinforced rod includes an upjacket substantially surrounding said outer topcoat layer.

45. (New) A reinforcement rod for optical cables comprising:  
a compact fiber reinforced rod comprising:  
a plurality of elongated fiber members encased in a resin matrix of a thermoplastic resin material; and  
an outer topcoat layer substantially surrounding said matrix, said outer topcoat layer including a thermoplastic hot melt ethylene acrylic acid polymer resin to impart specific bonding characteristics to said rod.
46. (New) A reinforcement rod for optical cables comprising:  
a compact fiber reinforced rod comprising:  
a plurality of elongated fiber members encased in a resin matrix of a thermally curable thermosetting resin material; and  
an outer topcoat layer substantially surrounding said matrix, said outer topcoat layer including a thermoplastic hot melt ethylene acrylic acid polymer resin to impart specific bonding characteristics to said rod.
47. (New) A reinforcement rod for optical cables comprising:  
a compact fiber reinforced rod comprising:  
a plurality of elongated fiber members encased in a resin matrix of a UV cured thermally curable thermosetting resin material, said UV cured vinyl ester resin material having a melting point within a range of from about 65° C to about 100° C; and  
an outer topcoat layer substantially surrounding said matrix, said outer topcoat layer including a thermoplastic hot melt ethylene acrylic acid polymer resin to impart specific bonding characteristics to said rod.
48. (New) The reinforcement rod of claim 34 wherein said elongated fiber members comprises an E glass fiber member.
49. (New) The reinforcement rod of claim 34 wherein said elongated fiber members comprises an S glass fiber member.

50. (New) The reinforcement rod of claim 34 wherein said elongated fiber members are selected from the group consisting of E glass fiber members, S glass fiber members, and combinations thereof.

51. (New) The reinforcement rod of claim 34 wherein said elongated fiber members are selected from the group consisting of E glass fiber members, S glass fiber members, high strength synthetic strands of poly(p-phenylene-2,6-benzobisoxazole) fiber members, and combinations thereof.

52. (New) The reinforcement rod of claim 34 wherein said UV cured vinyl ester resin material is selected from the group consisting of novolac vinyl ester and 1, 6 hexane diol diacrylate copolymer material (VINCH 500), and novolac vinyl ester and dipropylene glycol diacrylate copolymer material (17-41B).

53. (New) The reinforcement rod of claim 34 wherein said plurality of fibers comprises:

a plurality of E glass roving fibers; and  
a plurality of S glass roving fibers.

54. (New) The reinforcement rod of claim 53 wherein said plurality of fibers further comprises a plurality of high strength synthetic strand members.

55. (New) The reinforcement rod of claim 53 wherein said plurality of fibers further comprises a plurality of high strength aramid strands.

56. (New) The reinforcement rod of claim 54 wherein said plurality of fibers further comprises a plurality of polyphenylene terephthalate strand members.

57. (New) The reinforcement rod of claim 34 wherein said plurality of fibers comprises:

- a plurality of E glass roving fibers;
- a plurality of S glass roving fibers; and
- a plurality of high strength aramid strands.

59. (New) The reinforcement rod of claim 34 wherein said plurality of fibers comprises:

- a plurality of E glass roving fibers;
- a plurality of S glass roving fibers; and
- a plurality of high strength polyphenylene terephthalate strands.

60. (New) The reinforcement rod of claim 34 wherein said plurality of fibers comprises a plurality of fibers selected from the group consisting of E glass fibers, S glass fibers, aramid fibers, polyphenylene terephthalate strands, and combinations thereof.

61. (New) The reinforcement rod of claim 34 includes an upjacket substantially surrounding said reinforcement rod.

62. (New) The reinforcement rod of claim 34 wherein said UV cured vinyl ester resin material has a melting point within a range of from about 65° C to about 100° C.

63. (New) The reinforcement rod of claim 34 wherein said ethylene acrylic acid polymer resin includes has a melting point within a temperature range of from about 150° C to about 230° C.

64. (New) The reinforcement rod of claim 46 wherein said ethylene acrylic acid polymer resin includes has a melting point within a temperature range of from about 150° C to about 230° C.